

**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

**CONSERVATION PRACTICE STANDARD**

**CHISELING AND SUBSOILING**

(Acre)

**Code 324**

**DEFINITION**

Loosening the soil, without inverting and with a minimum of mixing of the surface soil, to shatter restrictive layers below normal plow depth that inhibit water movement or root development.

**PURPOSE**

To improve water and root penetration and aeration.

**CONDITIONS WHERE PRACTICE APPLIES**

On suitable soils, chiseling is applicable if restrictive soil layers are less than 16 inches deep. On suitable soils, subsoiling is applicable if restrictive soil layers are more than 16 inches deep.

**PLANNING CONSIDERATIONS**

1. Chisel plows with straight points will cover less residue than twisted or helical points.
2. Parabolic chisel or subsoil shanks require significantly less energy to pull than straight shanks.
3. Chiseling or subsoiling will decrease runoff and increase infiltration by mechanically shattering restrictive layers in the soil.

4. Chiseling or subsoiling may be needed yearly on soils that form traffic pans.

5. Chiseling or subsoiling can increase crop rooting depth, thus the depth of nitrate utilization is increased before they leach below the root zone.

**SPECIFICATIONS**

1. Chiseling and subsoiling are applicable on all upland soils where restrictive layers are present.
2. Work shall be performed when soils are dry. Soil moisture should be at levels that are normally considered too dry for optimum turnplowing.
3. For chiseling, spacing shall be no wider than 24 inches. For subsoiling, the spacing shall be no wider than 48 inches.
4. Subsoiling shall be performed across the general slope of the field.
5. If it meets spacing requirements in item 3 above, chiseling may be performed in crisscross fashion. The final operation shall be performed across the general slopes of the field.
6. Implements will be set to completely penetrate restrictive layers.

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.</p>
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